REMARKS/ARGUMENTS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments to the claims and the following remarks. As the Examiner will note, applicants have added new claims 12-20 along the lines suggested on page 3 of the January 10, 2005 Official Action. That is, new independent claim 12 refers to the use of a pencil coater to apply a metal oxide coating to selected brazed joints of the water-cooled stator bars using an ion plasma deposition technique. Thus, for at least the reasons cited by the Examiner, applicants submit that independent claim 12, as well as related dependent claims 13-15, are clearly allowable over the prior art of record.

In like manner, new independent claim 16 and dependent claims 17-20 relate to applicants' alternative embodiment of the invention that involves cutting an end portion of the inlet and outlet fittings to form a mated dovetail configuration with the portions being rejoined after the protective coating is applied. Again, for at least the reasons cited by the Examiner on page 3 of the Official Action, applicants submit that new claims 16-20 are clearly allowable over the prior art of record.

In response to the Examiner's rejections of original claims 1-11, applicants respectfully submit that the obviousness rejection under Section 103 based on the '869, '165 and '560 patents to Travaly, Budinger et al and Zhao et al should be withdrawn for the following reasons.

The '869 patent to Travaly concerns a method for repairing a generator stator bar, particularly the end fittings and outmost strand of the stator bar. The described method includes the on-site removal of a majority of the end fitting such that only a continuous ring surrounding the strand bundle remains, leaving the original brazing between adjacent strands in place. The exterior of the ring that remains is then machined, followed by cleaning with a chemical solvent,

to allow a replacement end fitting to be attached by additional brazing. The machined ring surrounding the exterior periphery of the strands is then inserted into the replacement end fitting (see end fitting 85 in Fig. 3) and brazed, preferably with a copper phosphorous alloy with a melting point temperature below the original brazed alloy melting point. *See* Col. 2, lines 35 through 62.

In essence, the '869 patent teaches a method of repairing stator bar end fittings using a second end fitting that is "similar in geometry" to the original. In that sense, the '869 patent offers an effective, but quite different, solution to the problem of improving the life expectancy of stator bar end fittings. As the Examiner recognizes, Travaly '869 does not teach or suggest using a protective metal oxide coating of any kind over selected portions of the original brazed joints of the copper strands in the stator bar, particularly for new constructions. Instead, the '869 patent teaches a repair method that requires an additional hardware component attached to the original end fitting. Thus, applicants respectfully submit that the Travaly repair technique, although very useful in repairing existing stator bars, otherwise is inapposite to the specific solution described by applicants and as reflected in original claims 1-11.

The deficiencies in Travaly '869 relative to claims 1-11 are not cured by the '165 patent to Budinger et al. The '165 patent describes the manufacture of a brazed assembly for use in turbine engine components. The assembly uses an "environmentally resistant coating" (such as an aluminum diffusion coating) applied after the initial brazing and assembly steps. Significantly, the '165 coating covers the entire brazed assembly (referred to as the "wear resistant material perform"), including a "wear resistant portion." Moreover, the entire assembly is coated only after it has been brazed, heat treated and machined to a prescribed geometry. The '165 patent also makes clear that the method of manufacture relates to rotating turbine engine

components that "cooperate closely, frequently in a sliding or rubbing relationship, with an adjacent component of the apparatus, for example, a turbine nozzle and a shroud hanger." Col. 1, lines 22-25.

Thus, applicants respectfully submit that the '165 patent describes a solution to a problem encountered in turbine engine components that are in direct sliding engagement with one another. The problem is therefore quite different from that solved by the present invention. The brazed and coated assembly technique in Budinger et al simply would not be used to increase the life expectancy of water cooled stator bar clips that do not engage other components, particularly at comparable high temperatures. Further, Budinger et al do not teach or suggest the benefit of applying a protective coating to selected portions of the inlet and outlet end fittings of water cooled stator bars, particularly fittings comprised of hollow and solid copper strands that do not include a "wear resistant surface."

Thus, for the above reasons, applicants respectfully submit that original claims 1, 3-7 and 9-11 should be allowed over the cited prior art. Those claims would not be obvious to persons skilled in the art who relied on the combined teachings of Travaly and Budinger et al simply because those references offer different solutions to problems different from those being solved by applicants' invention.

Finally, with respect to dependent claims 2 and 8 (which refer to a coating thickness of between 0.5 and 50 microns), applicants submit that those claims likewise would not be obvious based on the combination of Travaly, as modified by Budinger et al in view of the Zhao et al '560 patent. Zhao et al describes an "environmentally resistant coating" for improving the oxidation resistance of a specific subset of metal composites, namely those comprised of a niobium-based refractory metal intermetallic composite ("referred to in the patent as "Nb-based

RMIC"). The stated purpose of the coatings is to provide improved oxidation resistance of the intermetallic composites at "high temperatures," typically between 2,000 and 2,500 degrees F. *See, e.g.*, Col. 1, line 65 through Col. 2, line14. Although the Zhao coating thicknesses fall between about 10 and 200 microns, applicants again respectfully submit that persons skilled in the art would not look to Zhao et al for a solution to a very different type of problem occurring at very different operating temperatures, i.e., the need to provide increased corrosion protection to the interior brazed joints of the end fittings on water-cooled stator bars.

For all the foregoing reasons, applicants respectfully request prompt reconsideration and early allowance of all pending claims in the application.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____
James T. Hosmer
Reg. No. 30,184

JTH:lsp
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100